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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,509	09/08/2003	Kazuaki Nakamura	KON-1818	9322

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EXAMINER

CHEA, THORL

ART UNIT PAPER NUMBER

1752

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

6

<b>Office Action Summary</b>	<b>Application No.</b> 10/657,509	<b>Applicant(s)</b> NAKAMURA ET AL.	
	<b>Examiner</b> Thorl Chea	<b>Art Unit</b> 1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-9 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-9, 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This office action is responsive to the communication on May 11, 2006; claims 2-9, 15-17 are pending in this instant application; claims 1, 10-14, 17 have been canceled.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-9, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Fukui et al (US 2002/0102502), Patent Specification 1543266 (PS'266) and Oya et al (US 2001/0051319).

See the material discloses on pages 38-41, claims 1-20, especially the compound of formula (I), (II) in claim 1, the compound of formula (III) in claim 11; the molar ratio of compound of formula (I) to formula (II) of 0.001 to 0.2. See also the generic formula (III), and the its exemplified compound on page 6-10. The compound of formula (1) of Fukui contains L as –CHR<sup>13</sup>- wherein R<sup>13</sup> is an hydrogen or an alkyl group having 1-15 carbon atoms. See page 3, column 1. Fukui et al fails to specifically discloses whether R11 and R12 are each a hydrogen atom, membered non-aromatic ring group or a 5- or 6-membered aromatic ring group, provided that R11 and R12 are not hydrogen atoms at the same time claimed in the present invention. However, the groups as claimed have been known as an equivalent to the alkyl group of Fukui et al and discloses in PS'226 on page 15, lines 10-15 which discloses the alkyl, aryl, and phenyl group as substituent for the phenol compound useful in heat-developable material and Oya et al,

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compound of formula (1) on page 1, column, and on page 3, column 1, [0027] disclosed that V<sup>9</sup> is a cyclic alkyl. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to associate a group known as equivalent to the alkyl group taught in PS'226 such as the aryl group or phenyl group with the phenol compound taught in Fukui et al with a reasonable expectation of achieving a highly useful photothermographic material that give an image with good tone, and thereby provide a photothermographic as claimed. A prima facie case of obviousness may be made when chemical compounds have very close structural similarity and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (discussed in more detail below) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991) (discussed below and in MPEP § 2144) for an extensive review of the case law pertaining to obviousness based on close structural similarity of chemical compounds. See also MPEP § 2144.08, paragraph II.A.4.(c). In this case, the bisphenols compound have been known as reducing agents for silver ion, and the worker of ordinary skill in the art would either used a known phenol reducing agents having similar utility as reducing agent for silver ion such as shown in either Oya et al or Patent Specification 1543266 (PS'266) with an expectation of reducing silver ions and producing silver image.

#### ***Response to Arguments***

4. Applicant's arguments filed on May 11, 2006 have been fully considered but they are not persuasive for the reason set forth in the office action dated February 10, 2006. The

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compound of formula (I) and formula (II) have been known as orthobishenol and para-biphenol reducing agent for silver salt of an organic acid including silver salt of an aliphatic carboxylic acid that can be used separately or a mixture thereof such as disclosed in PS'266 on page 14 last paragraph and page 15, formula (I) and (II). In the formula (I), R3 and R4 represents hydrogen, alkyl group or aryl group. Therefore, the alkyl group and aryl group are considered as equivalent group. The aryl group encompasses the scope of the 5- 6-membered aromatic ring group of the formula (1) of the present claimed invention (claim 15). Therefore, it would have been obvious to the worker of ordinary skill in the art to use a parabiphenol reducing agent taught in PS'266 in lieu of the para-bisphenol compound used in Fukui et al with an expectation of achieving at least same results.

The comparative results presented in Declaration under 37 CFR 1.132 submitted on May 11, 2006 are insufficient to overcome the prima facie case of obviousness rejections set forth above. First, the criticality of the ranges of the molar ratio of the compound of formula (3) to the compound represented by formula (1) has not been established. The single ratio of 0.08 is within the range of 0.001 to 0.2, but this single value cannot be used to determine the criticality of the range unless the value outside the range has been provided, i.e., no value below and above the claimed ranges has been used as comparative values. Second, the compound 1-1, 1-2, 1-7, 1-12, 1-13, 1-15, 1-40, 1-143 shown in Table 6 of the Declarations are not related to the aryl group such as phenyl or naphthyl group taught in PS'266 including the reducing agent on page 3, compound (f) of PS'266. The 6-membered aromatic ring group encompasses the scope of phenyl group taught in PS'266. The compound 1-1, 1-2, 1-7, 1-12, 1-13, 1-15, 1-40, 1-43 contain no phenyl group while the compound as claimed encompasses the phenyl group preferred in

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PS'266. Third, the silver salt of an organic acid as claimed encompass the scope of the silver salt of an aliphatic carboxylic acid having 10 to 30 carbon atom while the results shown in the Declaration is related to the silver salt of aliphatic carboxylic acid having 20 carbon atoms such as silver behenate preferred both in Fukui et al and in the presented application disclosure. Therefore, the results are related to the preferred silver salt of an aliphatic carboxylic acid containing high percentage of silver behenate preferred in Fukui et al which is not commensurate with the scope of silver salts of an aliphatic carboxylic acid claimed in the presented claimed invention.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea *thc*  
June 30, 2006

*Thori Chea*  
Thori Chea  
Primary Examiner  
Art Unit 1752